

Investigating the perceived impact of multimedia-based children's literature on autonomous English learning among Indonesian EFL students

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Abstract: This study explores the perceptions of EFL students at Universitas Negeri Padang toward the use of digital children's literature—specifically Storynory and Storybooks Canada—as a tool for autonomous English language learning. Drawing on a descriptive quantitative design, the research collected data from 27 students who had used these platforms during their Introduction to Literature course. A structured questionnaire assessed both physical (visual and auditory) and psychological (emotional engagement, motivation, and self-confidence) aspects of digital storytelling. The results revealed consistently positive perceptions across both dimensions, with an overall mean score of 3.44 on a four-point Likert scale. Students reported that the multimedia features of digital stories enhanced their comprehension, motivation, and enjoyment, while also supporting independent learning. However, slightly lower scores related to linguistic self-confidence suggest a need for additional pedagogical support. These findings highlight the potential of digital children's literature to foster learner autonomy and engagement in EFL contexts and offer insights for educators and curriculum designers seeking to integrate such tools into higher education language instruction.

Keywords: digital storytelling; children's literature; EFL students; learner autonomy; EFL students

1. Introduction

In contemporary education, the digital transformation of education has significantly reshaped English language learning by introducing innovative and interactive media that support both classroom instruction and autonomous learning (Haleem et al., 2022; Samala et al., 2024). Among these innovations, digital children's literature which integrates multimedia elements such as animation, audio narration, and interactive design offers an engaging and immersive storytelling experience for language learners (Moro & Kirchof, 2024; Palioura & Dimoulas, 2022). In English as a Foreign Language (EFL), these platforms not only enhance reading and listening skills but also cater to various learning styles and promote digital literacy (Astri et al., 2024; Hazaymeh, 2021; Yang & Kuo, 2023). At Universitas Negeri Padang (UNP), for instance, EFL students have utilized platforms such as Storynory (storynory.com), Storybooks Canada (storybookscanada.ca), and Pratham Books (prathambooks.org) in both classroom-based and self-directed learning activities.

The integration of digital children's literature into EFL pedagogy is consistent with the global shift toward technology-enhanced and learner-centered education, especially since the COVID-19 pandemic accelerated the adoption of blended and hybrid learning models (Ali et al., 2024). Previous studies have highlighted the pedagogical benefits of digital storytelling, including reducing learner anxiety, increasing motivation, and improving vocabulary acquisition among young learners (Kristiawan et al., 2022; Liang & Hwang, 2023; Tecedor, 2024). However, while there is growing

interest in digital media and child-centered materials in language instruction, limited research has examined EFL students' perceptions of digital children's literature as a tool for autonomous learning. Gaining insight into how learners engage with and respond to these materials is crucial for educators and curriculum developers aiming to integrate such resources effectively into language programmes (I. S. J. [Chen et al., 2025](#); [Yeh, 2024](#)).

Earlier studies on digital learning in EFL classrooms have primarily focused on teachers' perspectives or measurable outcomes such as vocabulary gains. For example, ([Yu et al., 2022](#)) explored students' general attitudes toward digital media in English instruction, while ([Jimoyiannis & Koukis, 2023](#)) examined teachers' beliefs about digital learning tools during remote instruction. According to ([Jimoyiannis & Koukis, 2023](#)) demonstrated the vocabulary benefits of using Storynory in intermediate listening classes, and ([Okyay & Kandir, 2021](#)) reported improvements in vocabulary acquisition through picture books from Storybooks Canada. Nevertheless, these studies do not fully address learners' affective and cognitive experiences in using such tools autonomously outside the classroom.

Given that motivation, emotional engagement, and digital competence are key components in second language acquisition ([Li & Lan, 2022](#)), it is essential to explore how students perceive and utilize digital story platforms during independent study. This inquiry is especially relevant in today's context, where AI-powered reading assistants, mobile learning apps, and interactive e-literature are becoming increasingly common in EFL education ([Datau & Setyorini, 2023](#)). In alignment with the journal's scope particularly its emphasis on digital pedagogy, materials design, and learner autonomy this study seeks to fill the gap by investigating the perspectives of EFL students at UNP on the use of digital children's literature in supporting autonomous English learning. Drawing on this context, the study is guided by the following research questions:

- RQ1. How do EFL students perceive the use of digital children's literature platforms, such as Storynory and Storybooks Canada, in supporting their autonomous English learning?
- RQ2. What are the perceived benefits and challenges experienced by EFL students when engaging with digital children's literature for out-of-class reading and listening practice?
- RQ3. How can digital children's literature be effectively integrated into EFL curriculum design to promote learner autonomy and enhance language acquisition in higher education settings?

Examining EFL students' experiences and perceptions, this study contributes to ongoing discussions in applied linguistics and language education. It provides practical insights for educators, materials designers, and policy-makers seeking to harness the potential of digital children's literature to support inclusive, autonomous, and digitally enriched language learning environments.

2. Methods

This study employed a descriptive quantitative research design to investigate EFL students' perceptions of digital children's literature as a medium for autonomous English language learning. As outlined by ([Mulisa, 2022](#)), a quantitative approach allows for the systematic collection and analysis of numerical data to identify patterns and relationships within a given educational. This methodology was deemed appropriate to objectively measure students' attitudes, experiences, and perceived benefits and challenges associated with the use of digital storytelling platforms ([Palioura & Dimoulas, 2022](#); [Zarifsanaiey et al., 2022](#)).

The research was conducted at the Faculty of Languages and Arts, Universitas Negeri Padang (UNP), involving undergraduate students who had completed the "Introduction to Literature" course in the July–December 2023 academic semester. These students had prior exposure to digital children's

literature websites, specifically *Storynory* (storynory.com) and *Storybooks Canada* (storybookscanada.ca), which had been integrated into both classroom instruction and autonomous learning activities.

The primary instrument for data collection was a structured questionnaire composed of 20 items using a four-point Likert scale (4 = Strongly Agree, 3 = Agree, 2 = Disagree, 1 = Strongly Disagree) (Baburajan et al., 2022). The questionnaire aimed to measure two core dimensions of students' perceptions: physical aspects (items 1–10), focusing on visual and auditory influences on comprehension and learning motivation, and psychological aspects (items 11–20), which included emotional engagement, ease of access, learner autonomy, and self-confidence. To ensure the instrument's validity, it was reviewed by two senior lecturers in English language education, and a pilot test was conducted with 10 students outside the main sample (Cheng, 2017). The feedback led to minor revisions that improved the clarity and reliability of the items (Dalawi et al., 2023; Mota et al., 2021).

The finalized questionnaire was distributed online via Google Forms to facilitate accessibility and convenience (Al-Marroof et al., 2021). Participation was entirely voluntary, and informed consent was obtained from all respondents prior to data collection. The data collection process spanned two weeks, during which follow-up reminders were sent to enhance the response rate (Middleton et al., 2021; Webborn et al., 2022). In total, 27 students participated in the study. Upon completion, the responses were compiled and using analyzed using descriptive statistics in Microsoft Excel, including frequency distributions, mean scores, and standard deviations (Kotronoulas et al., 2023; Ruffing et al., 2024). The findings provide a quantitative overview of students' engagement with digital children's literature, with implications for educators, curriculum developers, and policymakers aiming to integrate digital storytelling as a strategy for promoting learner autonomy and improving English language learning in higher education.

3. Results

This study collected data through an online questionnaire (Google Forms) distributed to 27 EFL students in Introduction to Literature class. The questionnaire used a four-point Likert scale (4 = Strongly Agree, 3 = Agree, 2 = Disagree, 1 = Strongly Disagree) and was divided into two main aspects: Physical Aspects (items 1-10) which evaluated how the visual and audio elements in the Storynory and Storybooks Canada sites affected comprehension as well as learning motivation, and Psychological Aspects (items 11-20) which examined students' emotional engagement, ease of access, learning autonomy, and self-confidence.

As shown in Table 1, students generally held positive perceptions regarding the physical elements of digital short stories. The mean score across the 10 items under the physical aspect was 3.44, indicating a strong level of agreement. Over 98% of respondents either agreed or strongly agreed that the visual (e.g., colorful illustrations) and audio features (e.g., clear narration) helped enhance their enjoyment and comprehension of English materials. For example, item 3 ("Reading short stories with colorful pictures stimulates my sense of sight") received a high mean of 3.56, while item 4 ("Listening to short stories with clear audio...") scored 3.41. These findings suggest that the sensory stimuli embedded in the stories were effective in engaging students' attention and enhancing their learning experience.

Table 1. Students' perceptions of physical aspects in using digital short stories from Storynory.com

No	Statement	Strongly agree	Agree	Disagree	Strongly disagree	Mean
1	Using short stories from Storynory makes me enjoy studying English, especially reading and listening.	55.60%	44.40%	0%	0%	3.37
2	Using short stories from Storynory enhances my English learning through engaging visuals and audio.	48.10%	51.90%	0%	0%	3.52
3	Reading short stories with colorful pictures on Storynory stimulates my sense of sight in understanding English material.	55.60%	44.40%	0%	0%	3.56
4	Listening to short stories with clear audio on Storynory stimulates my sense of hearing in understanding English material.	44.40%	55.60%	0%	0%	3.41
5	Text and audio on Storynory make me more interested in learning English.	59.30%	37%	3.70%	0%	3.52
6	I feel more confident using English after reading short stories on Storynory.	25.90%	74.10%	0%	0%	3.26
7	I feel more confident using English after listening to short stories on Storynory.	25.90%	63%	11.10%	0%	3.19
8	I enjoy autonomous listening activities by listening to short stories from Storynory.	40.70%	59.30%	0%	0%	3.41
9	I enjoy autonomous reading activities by reading short stories from Storynory.	37%	63%	0%	0%	3.33
10	Text and audio short stories from Storynory increase my effort in learning English.	63%	37%	0%	0%	3.44
Total mean (Physical Aspect)		45.55%	52.97%	1.48%	0%	3.44

Referring to Table 2, students also perceived the psychological aspects of using digital short stories positively, with a mean score again of 3.44. The responses reflect that students found the platform emotionally engaging, accessible, and supportive of autonomous learning. Notably, item 19 ("The variety of short stories is engaging and relevant") recorded the highest mean score of 3.63 among all items, indicating strong appreciation for the content diversity. Similarly, item 11 ("Text and audio from Storynory make me enjoy the learning process") received a high rating of 3.56. This demonstrates that digital storytelling fostered enjoyment, increased confidence, and facilitated independent learning among EFL students.

Table 2. Students' perceptions of psychological aspects in using digital short stories from Storynory.com

No	Statement	Strongly agree	Agree	Disagree	Strongly disagree	Mean
11	Text and audio from Storynory make me enjoy the learning process.	55.60%	44.40%	0%	0%	3.56
12	Short stories from Storynory enhance my English learning experience through engaging visuals and audio.	44.40%	55.60%	0%	0%	3.44
13	I am more focused on English materials when autonomously reading short stories from Storynory.	25.90%	74.10%	0%	0%	3.26
14	I am more focused on English materials when autonomously listening to short stories from Storynory.	29.60%	66.70%	3.70%	0%	3.33
15	Using short stories from Storynory makes learning English more enjoyable.	51.90%	48.10%	0%	0%	3.56
16	It is easy to find and access stories on Storynory for autonomous learning.	48.10%	51.90%	0%	0%	3.52
17	I would recommend the use of Storynory to other EFL students for autonomous learning.	37%	63%	0%	0%	3.44
18	Using Storynory positively impacts my regular English language classes.	40.70%	59.30%	0%	0%	3.48
19	The variety of short stories on Storynory is engaging and relevant.	63%	37%	0%	0%	3.63
20	I feel that the short stories from Storynory are suitable for my language proficiency level.	29.60%	66.70%	3.70%	0%	3.19
Total mean (Psychological aspect)		43.68%	53.56%	2.76%	0%	3.44

A comprehensive comparison is provided in Table 3. Both the physical and psychological aspects share an identical mean score of 3.44, with overall agreement levels surpassing 98% and minimal disagreement (only 2.12% overall). This balanced outcome indicates that students found both the sensory (physical) and emotional-cognitive (psychological) dimensions of digital short stories equally valuable in supporting their English learning. The overall average perception, as displayed in Table 3, confirms that students held a consistently positive view across all evaluated dimensions.

Table 3. Comparison of Physical and Psychological Aspects in Students' Overall Perceptions Toward Digital Short Stories

Theme	Strongly agree	Agree	Disagree	Strongly disagree	Mean score	Degree of perception
Physical Aspect	45.55%	52.97%	1.48%	0%	3.44	Positive
Psychological Aspect	43.68%	53.56%	2.76%	0%	3.44	Positive
Overall average	44.62%	53.27%	2.12%	0%	3.44	Positive

4. Discussion

The findings of this study reveal that EFL students at Universitas Negeri Padang hold consistently positive perceptions toward the use of digital children's literature specifically Storynory and Storybooks Canada for autonomous English language learning. Both the physical and psychological dimensions of engagement with these platforms yielded an identical mean score of 3.44, indicating high levels of agreement regarding the benefits of digital storytelling in supporting language acquisition. This suggests that the multimedia features (e.g., visuals, narration, and interactivity) and the affective design of digital stories contribute meaningfully to learners' motivation, comprehension, and self-perceived confidence.

These results are consistent with previous research highlighting the pedagogical potential of digital storytelling in second language education. For instance, studies by (Hazaymeh, 2021) and (Liang & Hwang, 2023) emphasized that multimodal input especially visual and auditory elements enhances comprehension and retention, particularly for learners with diverse cognitive styles. The high mean scores on items related to enjoyment, focus, and emotional engagement further reinforce claims by (Mohammadi Zenouzagh et al., 2023) that digital storytelling can lower affective filters, reduce anxiety, and promote learner autonomy.

The strong student response to physical elements such as clear audio and colorful illustrations supports the idea that multimodal texts stimulate multiple sensory channels, which in turn improves both engagement and learning outcomes (Higgs & Kim, 2022; Tyrer, 2021). Meanwhile, the psychological benefits such as increased enjoyment of the learning process, perceived ease of access, and heightened focus during autonomous activities position digital children's literature as an effective scaffolding tool for promoting self-directed learning, a cornerstone of 21st-century education (Choy & Cheung, 2022; Kharroubi & ElMediouni, 2024).

However, despite the overwhelmingly positive perceptions, some challenges were implicitly indicated through relatively lower mean scores on items related to self-confidence (Items 6, 7, and 20). These scores suggest that certain students may still experience hesitation in applying their English skills independently, especially when faced with unfamiliar vocabulary or syntactic complexity without teacher support. Moreover, as this study relied solely on structured responses, other potential challenges—such as screen fatigue, limited internet access, or difficulty in establishing consistent learning routines may not have been fully captured. Future studies utilizing qualitative methods such as interviews or reflective journals are encouraged to explore these dimensions more comprehensively.

Notably, the high percentage of students willing to recommend these platforms to peers (Item 17, M = 3.44) reflects a growing cultural shift toward peer-driven adoption of educational technology. This finding is aligned with (Yang & Kuo, 2023), who suggest that learner endorsement is a reliable predictor of sustained engagement and broader digital tool uptake. Still, the slightly lower mean scores

in confidence-related items point to an important nuance: while digital children's literature contributes to enjoyment and comprehension, its effectiveness in building linguistic self-efficacy may require additional pedagogical interventions. These may include structured feedback mechanisms, peer collaboration, or reflective activities aimed at reinforcing learners' metacognitive awareness (H. Chen et al., 2024; [Ramadan Elbaoui Shaddad & Jember, 2024](#); [Souzandehfar & Ahmed Abdel-Al Ibrahim, 2023](#)).

Framed within the broader discourse on digital learning, the current study affirms that digital children's literature is more than a supplemental tool; it is a pedagogically robust, accessible, and affectively engaging resource that supports English language learning beyond the boundaries of traditional classrooms. As hybrid and blended learning environments become increasingly normalized post-COVID-19 ([Moorhouse et al., 2023](#); [Qamar et al., 2024](#)), platforms like Storynory and Storybooks Canada offer promising avenues to bridge formal instruction with informal, autonomous language practice.

In sum, this study adds to the growing body of literature by offering learner-centered empirical evidence a perspective often overlooked in studies focused predominantly on teacher attitudes or standardized test outcomes. The insights gained here offer practical implications for curriculum developers, language educators, and digital content creators aiming to design inclusive, engaging, and learner-driven resources in EFL contexts.

Building on these findings, the integration of digital children's literature into higher education curricula can be approached strategically. First, educators can design blended learning modules that incorporate weekly autonomous reading or listening assignments using selected stories, followed by reflective discussions or vocabulary journals. Second, platforms like Storynory and Storybooks Canada can be embedded into project-based learning, where students summarize, dramatize, or recreate stories using multimedia. Finally, structured guidance such as curated story paths based on proficiency levels and peer feedback mechanisms can serve to scaffold learner autonomy while maintaining engagement. These strategies not only strengthen out-of-class language exposure but also align with the increasing demand for digital literacy and independent learning skills in higher education.

5. Conclusion

The findings of this study demonstrate that EFL students perceive digital children's literature as a valuable resource for autonomous English learning. Both the physical elements (e.g., visuals and clear audio narration) and psychological aspects (e.g., emotional engagement, motivation, and accessibility) were positively received, each scoring an identical mean of 3.44. These results indicate that digital storytelling platforms effectively support independent language practice by enhancing learner enjoyment, comprehension, and focus. Nevertheless, while students generally responded favorably, the slightly lower mean scores on items related to self-confidence suggest that digital story engagement alone may not fully address all aspects of language development. Learners may still require scaffolding, feedback, and structured activities to build linguistic self-efficacy. Overall, digital children's literature emerges as a pedagogically promising tool that can bridge formal instruction and informal, autonomous learning, particularly in the post-pandemic shift toward blended and hybrid education.

In light of these findings, several practical recommendations are proposed. First, educators should consider incorporating digital children's literature into blended learning modules through weekly autonomous reading or listening assignments, followed by in-class reflections or vocabulary-based tasks. Second, storytelling platforms can be used in project-based learning where students are encouraged to recreate or adapt stories using multimedia formats, thus promoting creativity and digital

literacy. Third, to address students' varying levels of self-confidence, instructors can provide curated story paths aligned with learners' proficiency levels, include peer collaboration activities, and integrate structured feedback to reinforce language skills. Finally, future research should adopt mixed-method approaches, including interviews or learner diaries, to gain deeper insights into students' challenges and strategies during autonomous digital story engagement. These steps will help maximize the pedagogical value of digital children's literature and support a more inclusive, learner-centered EFL environment in higher education.

Author's declaration

Author contribution

Zhafira Ramadhani.F: conceptualization, data collection, data analysis, writing-original draft, review and editing. **Leni Marlina:** instrument validation, data curation, resources, and supervision.

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Data availability

The authors state that the data of this study are available to access for educational purposes only by sending a request e-mail to the corresponding author. It is strictly prohibited to use the data for commercial and personal uses without any permission from the authors.

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Conflict of interest

The authors declare no conflict of interest in this research and publication.

Ethical clearance

This study was conducted in line with the Helsinki Declaration, and by the permit from the Dean of Faculty of Languages and Arts Number 5734/UN35.5/LT/2023.

AI statement

This article is the original work of the author without using AI tools for writing sentences and/or creating/editing table and figures in this manuscript.

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